CONDITIONS OF CERTIFICATION

Pittsburg District Energy Facility Conditions of Certification

Definitions:

Clock Hour:	Any continuous 60-minute period beginning on the hour.
Calendar Day:	Any continuous 24-hour period beginning at 12:00 AM or 0000 hours.
Year:	Any consecutive twelve-month period of time
Heat Input:	All heat inputs refer to the heat input at the higher heating value (HHV) of the fuel, in BTU/scf.
Rolling 3-hour period:	Any three-hour period that begins on the hour and does not include start-up or shutdown periods.
Firing Hours:	Period of time during which fuel is flowing to a unit, measured in fifteen minute increments.
MM BTU:	million british thermal units
Gas Turbine Start-up Mode:	The lesser of the first 120 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of conditions 21(b) and 21(d).
Gas Turbine Shutdown Mode:	The lesser of the 30 minute period immediately prior to the termination of fuel flow to the Gas Turbine or the period of time from non-compliance with any requirement listed in Conditions 21(a) through 21(f) until termination of fuel flow to the Gas Turbine.
Auxiliary Boiler Start-up:	The lesser of the first 120 minutes of continuous fuel flow to an Auxiliary Boiler after fuel flow is initiated; or the period of time from fuel flow initiation until the Boiler achieves two consecutive CEM data points in compliance with the emission concentration limits of conditions 28(b) and 28(d).
Auxiliary Boiler Shutdown:	The lesser of the 30 minute period immediately prior the termination of fuel flow to the Auxiliary Boiler; or the period of time from non-compliance with any requirement listed in Conditions 28(a) through 28(d) until termination of fuel flow to the auxiliary boiler.
Specified PAHs:	The polycyclic aromatic hydrocarbons listed below shall be considered to Specified PAHs for these permit conditions. Any emission limits for Specified PAHs refer to the sum of the emissions for all six of the following compounds.

Benzo[a]anthracene
Benzo[b]fluoranthene
Benzo[k]fluoranthene
Benzo[a]pyrene
Dibenzo[a,h]anthracene
Indeno[1,2,3-cd]pyrene

Corrected Concentration:	The concentration of any pollutant (generally NO_x, CO, or NH_3) corrected to a standard stack gas oxygen concentration. For emission point P-1 (Gas Turbine S-1 and HRSG S-2) and emission point P-2 (Gas Turbine S-3 and HRSG S-4) the standard stack gas oxygen concentration is 15% O_2 by volume on a dry basis. For emission point P-3 (Auxiliary Boiler S-5), the standard stack gas oxygen concentration is 3% O_2 by volume on a dry basis.
Commissioning Activities:	All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the PDEF construction contractor to insure safe and reliable steady state operation of the gas turbines, heat recovery steam generators, steam turbine, auxiliary boiler, and associated electrical delivery systems.
Commissioning Period:	The Period shall commence when all mechanical, electrical, and control systems are installed and individual system start-up has been completed, or when a gas turbine is first fired, whichever occurs first. The period shall terminate when the plant has completed performance testing, is available for commercial operation, and has initiated sales to the power exchange.
Precursor Organic Compounds (POCs):	Any compound of carbon, excluding methane, ethane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate
CEC CPM:	California Energy Commission Compliance Program Manager

Conditions for the Commissioning Period

AQ-1. The owner/operator of the ~~Pittsburg District Energy Facility (PDEF)~~Los Medanos Energy Center (LMEC) shall minimize emissions of carbon monoxide and nitrogen oxides from S-1 & S-3 Gas Turbines, S-2 & S-4 Heat Recovery Steam Generators (HRSG), and S-5 Auxiliary Boiler to the maximum extent possible during the commissioning period. Conditions 1 through 13 shall only apply during the commissioning period as defined above. Unless otherwise indicated, Conditions 14 through 51 shall apply after the commissioning period has ended.

Verification: The owner/operator shall submit a monthly compliance report to the California Energy Commission (CEC) Compliance Project Manager (CPM). In this report the owner/operator shall indicate how this condition is being implemented.

AQ-2. At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, the combustors of S-1 & S-3 Gas Turbines, S-2 & S-4 Heat Recovery Steam Generators, and S-5 Auxiliary Boiler shall be tuned to minimize the emissions of carbon monoxide and nitrogen oxides.

Verification: In the monthly compliance report the owner/operator shall indicate how this condition is being implemented.

AQ-3. At the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor, A-1 & A-3 SCR Systems and A-2 & A-4 Oxidation Catalysts shall be installed, adjusted, and operated to minimize the emissions of carbon monoxide and nitrogen oxides from S-1 & S-3 Gas Turbines and S-2 & S-4 Heat Recovery Steam Generators.

Verification: In the monthly compliance report the owner/operator shall indicate how this condition is being implemented.

AQ-4. Coincident with the steady-state operation of A-1 & A-3 SCR Systems and A-2 & A-4 Oxidation Catalysts pursuant to conditions 3, 8, and 9, the Gas Turbines (S-1 & S-3) and the HRSGs (S-2 & S-4) shall comply with the NOx and CO emission limitations specified in conditions 21(a) through 21(d) and condition 22.

Verification: In the monthly compliance report the owner/operator shall indicate how this condition is being implemented.

AQ-5. The owner/operator of the ~~PDEF~~LMEC shall submit a plan to the District Permit Services Division and the CEC CPM at least four weeks prior to first firing of S-1 and S-3 Gas Turbines describing the procedures to be followed during the commissioning of the turbines, HRSGs, auxiliary boiler, and steam turbine. The plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the Dry-Low-NO_x combustors, the installation and operation of the SCR systems and oxidation catalysts, the installation, calibration, and testing of the CO and NO_x continuous emission monitors, and any activities requiring the firing of S-1 and S-3 Gas Turbines and S-2 and S-4 HRSGs without abatement by the SCR Systems or oxidation catalysts.

Verification: Submission of a complete plan including information required that useful to establish the procedures to follow for conditions 1 through 3 shall be deemed a verification of this condition.

AQ-6. During the commissioning period, the owner/operator of the ~~PDEF~~LMEC shall demonstrate compliance with conditions 11 and 12 through the use of properly operated and maintained continuous emission monitors and recorders for the following parameters:

- firing hours
- fuel flow rates
- stack gas nitrogen oxide emission concentrations
- stack gas carbon monoxide emission concentrations
- stack gas oxygen concentrations.

The monitored parameters shall be recorded at least once every 15 minutes (excluding normal calibration periods or when the monitored source is not in operation) for S-1 and S-3 Gas Turbines, S-2 and S-4 HRSGs, and S-5 Auxiliary Boiler. The owner/operator shall use District-approved methods to calculate heat input rates, nitrogen oxide mass emission rates, carbon monoxide mass emission rates, and NO_x and CO emission concentrations, summarized for each clock hour and each calendar day. All records shall be retained on site for at least 5 years from the date of entry and made available to District personnel or CEC CPM upon request.

Verification: The owner/operator shall indicate in the monthly compliance report how this condition is being implemented.

AQ-7. The District-approved continuous monitors specified in condition 6 shall be installed, calibrated, and operational prior to first firing of S-1 & S-3 Gas Turbines, S-2 & S-4 Heat Recovery Steam Generators, and S-5 Auxiliary Boiler. After first firing of the turbines and auxiliary boiler, the detection range of these continuous emission monitors shall be adjusted as necessary to accurately measure the resulting range of CO and NO_x emission concentrations. The type, specifications, and location of these monitors shall be subject to District review and approval.

Verification: The owner/operator shall indicate in the monthly compliance report how this condition is being implemented.

AQ-8. The total number of firing hours of S-1 Gas Turbine and S-2 Heat Recovery Steam Generator without abatement of nitrogen oxide and carbon monoxide emissions by A-1 SCR System and A-2 Oxidation Catalyst shall not exceed 250 hours during the commissioning period. Such operation of S-1 Gas Turbine and S-2 HRSG without abatement shall be limited to discrete commissioning activities that can only be properly executed without SCR and oxidation catalysts in place. Upon completion of these activities, the owner/operator shall provide written notice to the District Permit Services and Enforcement Divisions and the unused balance of the 250 firing hours without abatement shall expire.

Verification: The owner/operator shall indicate in the monthly compliance report how this condition is being implemented.

AQ-9. The total number of firing hours of S-3 Gas Turbine and S-4 Heat Recovery Steam Generator without abatement of nitrogen oxide and carbon monoxide emissions by A-3 SCR System and A-4 Oxidation Catalyst shall not exceed 250 hours during the commissioning period. Such operation of S-3 Gas Turbine and S-4 HRSG without abatement shall be limited to discrete commissioning activities that can only be properly executed without SCR and oxidation catalysts in place. Upon completion of these activities, the owner/operator shall provide written notice to the District Permit Services and Enforcement Divisions and the unused balance of the 250 firing hours without abatement shall expire.

Verification: The owner/operator shall indicate in the monthly compliance report how this condition is being implemented.

AQ-10. The total mass emissions of nitrogen oxides, carbon monoxide, precursor organic compounds, PM10, and sulfur dioxide that are emitted by S-1, S-2,

S-3, S-4, and S-5 during the commissioning period shall accrue towards the consecutive twelve month emission limits specified in condition 33.

Verification: The owner/operator shall indicate in the monthly compliance report how this condition is being implemented.

AQ-11. Combined pollutant emissions from S-1 & S-3 Gas Turbines and S-2 & S-4 Heat Recovery Steam Generators shall not exceed the following limits during the commissioning period. These emission limits shall include emissions resulting from the start-up and shutdown of S-1 & S-3 Gas Turbines.

- NO_x (as NO_2) ~~1,360~~3,511 pounds per calendar day 616 pounds/hour
- CO ~~6,800~~10,848 pounds per calendar day 5,053.8 pounds/hour
- POC (as CH_4) 720 pounds per calendar day
- PM_{10} 816 pounds per calendar day
- SO_2 268 pounds per calendar day

Verification: The owner/operator shall indicate in the monthly compliance report how this condition is being implemented.

AQ-12. Pollutant emissions from S-5 Auxiliary Boiler shall not exceed the following limits during the commissioning period. These emission limits shall include emissions that occur during S-5 Auxiliary Boiler start-ups.

- NO_x (as NO_2) ~~69.8~~268 pounds per calendar day ~~2.91~~21 pounds per hour
- CO 233.8 pounds per calendar day ~~9.74~~14 pounds per hour
- POC (as CH_4) ~~8.64~~16 pounds per calendar day
- PM_{10} ~~31~~60 pounds per calendar day
- SO_2 ~~3.6~~8 pounds per calendar day

Verification: The owner/operator shall indicate in the monthly compliance report how this condition is being implemented.

AQ-13. Prior to the end of the Commissioning Period, the Owner/Operator shall conduct a District and CEC approved source test using external continuous emission monitors to determine compliance with condition 23. The source test shall determine NO_x, CO, and POC emissions during start-up and shutdown of the gas turbines. The POC emissions shall be analyzed for methane and ethane to account for the presence of unburned natural gas.

The source test shall include a minimum of three start-up and three shutdown periods. Twenty calendar days before the execution of the source tests, the Owner/Operator shall submit to the District and the CEC CPM a detailed source test plan designed to satisfy the requirements of this condition. The District and the CEC CPM will notify the Owner/Operator of any necessary modifications to the plan within 20 working days of receipt of the plan; otherwise, the plan shall be deemed approved. The Owner/Operator shall incorporate the District and CEC CPM comments into the test plan. The Owner/Operator shall notify the District and the CEC CPM within seven (7) working days prior to the planned source testing date. Source test results shall be submitted to the District and the CEC CPM within 30 days of the source testing date.

Verification: Approval of the source test plan and receipt of the source test reports is the verification of compliance with this condition.

Conditions for the Gas Turbines (S-1 & S-3) and the Heat Recovery Steam Generators (HRSGs) (S-2 & S-4).

AQ-14. The Gas Turbines (S-1 and S-3) and HRSGs (S-2 and S-4) shall be fired exclusively on natural gas ~~with a maximum sulfur content of 1 grain per 100 standard cubic feet~~. (BACT for SO_2 and PM_{10})

Verification: The owner/operator shall submit to the CEC CPM an Air Quality Report every January and July. The Air Quality Report shall include two components: an exceptions report, and a complete data report. The exceptions report shall be written, and shall identify all instances where any of the Conditions of Certification have not been met. The complete data report shall be submitted in electronic form, and shall contain all of the data required to demonstrate compliance with the daily and annual limitations on heat inputs and air pollutant emissions. The owner/operator may submit monthly reports in substitution of the semiannual reports with prior approval from the CEC CPM. These monthly reports could be coordinated with the reports required in Condition 43. ~~To demonstrate compliance with respect to the maximum sulfur content of the fuel, the owner/operator shall maintain on site the records of all the guarantees received from its natural gas suppliers indicating that the fuel delivered to PDEF complies with the above limitation.~~ These records shall be made available to the District or the CEC CPM upon request during on-site compliance inspections.

AQ-15. The combined heat input rate to each power train consisting of a Gas Turbine and its associated HRSG (S-1 & S-2 and S-3 & S-4) shall not exceed ~~2,012~~2,225.1 MM BTU per hour, averaged over any rolling 3-hour period. (PSD for NO_x)

Verification: As part of the Air Quality Reports, the owner/operator shall include information on the date and time when the hourly fuel consumption exceeds this hourly limit. The owner/operator must also report any violations of permit conditions in a timely manner, as required in condition 45.

AQ-16. The combined heat input rate to each power train consisting of a Gas Turbine and its associated HRSG (S-1 & S-2 and S-3 & S-4) shall not exceed ~~48,288~~50,738.4 MM BTU per calendar day. (PSD for PM_{10})

Verification: As part of the Air Quality Reports, the owner/operator shall include information on the date and time when the hourly fuel consumption exceed this daily limit.

AQ-17. The combined cumulative heat input rate for both Gas Turbines (S-1 and S-3) and both HRSGs (S-2 and S-4) shall not exceed ~~32,500,000~~34,010,400 MM BTU per year. (Offsets)

Verification: As part of the Air Quality Reports, the owner/operator shall report any violation of this condition.

AQ-18. The HRSG duct burners shall not be fired unless its associated Gas Turbine is in operation. (BACT for NO_x, CO, POC)

Verification: As part of the Air Quality Reports, the owner/operator shall include information on the date, time, and duration of any violation of this permit condition.

AQ-19. The Gas Turbine (S-1) and HRSG (S-2) shall be abated by the properly operated and properly maintained Oxidizing Catalyst (A-~~1~~2) and Selective Catalytic Reduction System (A-~~2~~1), in series. (BACT for NO_x and CO)

Verification: As part of the semiannual Air Quality Reports, the owner/operator shall provide information on any major problem in the operation of the Oxidizing Catalyst and Selective Catalytic Reduction Systems for the Gas Turbines and HRSGs. The information shall include, at a minimum, the date and description of the problem and the steps taken to resolve the problem.

AQ-20. The Gas Turbine (S-3) and HRSG (S-4) shall be abated by the properly operated and properly maintained Oxidizing Catalyst (A-~~3~~4) and Selective Catalytic Reduction System (A-~~4~~3), in series. (BACT for NO_x and CO)

Verification: As part of the semiannual Air Quality Reports, the owner/operator shall provide information on any major problem in the operation of the Oxidizing Catalyst and Selective Catalytic Reduction Systems for the Gas Turbines and HRSGs. The information shall include at a minimum the date and description of the problem and the steps taken to resolve the problem.

AQ-21. The owner/operator of the Gas Turbines (S-1 and S-3) and HRSGs (S-2 and S-4) shall meet all of the requirements listed in (a) through ~~(f)~~ (h) below, except during a Gas Turbine Start-up or a Gas Turbine Shutdown. (BACT, PSD, and Toxic Risk Management Policy)

(a) Nitrogen oxide emissions at P-1 (the combined exhaust point for the S-1 Gas Turbine and the S-2 HRSG after control by the A-1 SCR System and A-2 Oxidation Catalyst) shall not exceed ~~17.5~~20.0 pounds per hour, calculated as NO_2, nor 0.009 lbs/MM BTU of natural gas fired. Nitrogen oxide emissions at P-2 (the combined exhaust point for the S-3 Gas Turbine and the S-4 HRSG after control by the A-3 SCR System and A-4 Oxidation Catalyst) shall not exceed ~~17.5~~20.0 pounds per hour, calculated as NO_2, nor 0.009 lbs/MM BTU of natural gas fired. (PSD for NO_x)

(b) The nitrogen oxide concentration at P-1 and P-2 each shall not exceed 2.5 ppmv, corrected to 15% O_2, on a dry basis, averaged over any 1-hour period. (BACT for NO_x)

(c) Carbon monoxide emissions at P-1 and P-2 each shall not exceed ~~26.56~~29.2 pounds per hour, nor 0.0132 lb/MM BTU of natural gas fired. (PSD for CO)

(d) The carbon monoxide concentration at P-1 and P-2 each shall not exceed 6 ppmv, corrected to 15% O_2, on a dry basis, averaged over any rolling 3-hour period. (BACT for CO)

(e) Ammonia (NH_3) emissions at P-1 and P-2 each shall not exceed 10 ppmv, corrected to 15% O_2, on a dry basis, averaged over any rolling 3-hour period. This ammonia emission concentration shall be verified by the continuous records of the ammonia injection rate to A-1 and ~~A-2~~A-3 SCR Systems. The correlation between the gas turbine and HRSG heat input rates, A-1 and ~~A-2~~A-3 SCR System ammonia injection rates, and corresponding ammonia emission concentration at emission points P-1 and P-2 shall be determined in accordance with permit condition 38. (TRMP for NH_3)

(f) ~~(f)~~ Precursor organic compound (POC) emissions at P-1 and P-2 each shall not exceed ~~3.43~~3.8 pounds per hour, nor 0.0017 lb/MM BTU of natural gas fired. (BACT)

(g) Sulfur dioxide (SO_2) mass emissions at P-1 and P-2 each shall not exceed 6.2 pounds per hour or 0.00277 lb/MM BTU of natural gas fired. (BACT)

(h) Particulate matter (PM10) mass emissions at P-1 and P-2 each shall not exceed 16.3 pounds per hour or 0.0073 lb/MM BTU of natural gas fired. (BACT)

Verification: As part of the semiannual Air Quality Reports, the owner/operator shall indicate the date, time, and duration of any violation of this Condition. The owner/operator shall also include quantitative information on the severity of the violation.

AQ-22. The following conditions shall apply to NO_x emissions resulting from or attributable to transient, non-steady state operating conditions. (BACT for NO_x)

(a) CEM NO_x emission concentration data points that result from or are attributable to transient, non-steady state conditions shall not be subject to the emission limitations specified in Condition 21(b). In any event, the nitrogen oxide concentration at P-1 and P-2 each shall not exceed 2.5 ppmv, corrected to 15% O_2, on a dry basis, averaged over any rolling 3-hour period. All CEM NO_x emission concentration data points shall be utilized when determining compliance with this emission concentration limit.

(b) The emission limitation specified in Condition 22(a) shall be valid for a period not to exceed 24 months from the end of the Commissioning period. At such time the emission limitation specified in Condition 21(b) shall apply for all operating conditions except gas turbine start-up and shutdown periods, unless specific transient, non-steady state conditions are identified pursuant to conditions 22(f) and (g).

(c) Definitions

A transient, non-steady state condition shall occur when the following conditions exist:

(1) One or more equipment design features is unable to support rapid changes in operation and respond to and adjust all operating parameters required to maintain the steady-state NOx emission limit specified in condition 21(b). A change in operation shall be limited to one or more of the following: a change in combustion turbine load greater than 6 MW/minute; a change in

SCR system space velocity greater than 50 ft/minute; initiation/shutdown of the evaporative cooler; initiation/shutdown of the duct burners; and a change in duct burner firing rate greater than 600,000 BTU/minute. Additional non-steady state conditions may be defined based upon operational experience and mutual written agreement of the owner/operator, the District, ARB, CEC CPM, and EPA.

(2) For purposes of this condition, transient, non-steady state conditions shall not include the start-up and shutdown periods that are the subject of condition 23.

(d) The owner/operator shall maintain continuous emission monitor. (CEM) data and complete records of plant emission performance under transient, non-steady conditions.

(e) The owner/operator shall record the NO_x emission concentration and document the cause of each transient, non-steady state condition with operational data. A description of the specific parameters that will be monitored to document a transient, non-steady state condition shall be submitted to the District, ARB, CEC CPM, and EPA for approval at least 60 days prior to the end of the Commissioning period.

(f) Within 6 months of the end of the Commissioning period, the owner/operator shall compile and submit source test data, using a District-approved test protocol, to assess NO_x emissions under transient, non-steady state conditions. A source test protocol shall be submitted to the District, CEC CPM, and EPA for approval at least 60 days prior to testing.

(g) Within 15 months of the end of the Commissioning period, the owner/operator shall submit a plan to the District, CEC CPM, and EPA designed to minimize emissions during transient, non-steady state conditions. The plan shall identify reasonable measures that will be taken to control NO_x emissions. This plan shall be based upon the CEM and source test data developed in accordance with condition 22(e) and actual operating experience during the proceeding months of plant operation. The plan shall be developed in consultation with the manufacturers selected for the gas turbine, HRSG, control systems, and air pollution control units. After the plan has been approved by the District, CEC CPM, and EPA, the owner/operator shall use the procedures described in the plan to minimize NO_x emissions during transient, non-steady state conditions.

(h) On a semi-annual basis, for the first 24 months after the end of the Commissioning period, the owner/operator shall provide a report to

the District and the CEC CPM with continuous emission monitoring and source test data developed in accordance with this condition. The District will use the data and related operating experience to establish maximum NO_x emission limits for transient, non-steady state conditions for the following 6 month period. The District will consider operations at similar (e.g., electrical generation and fuel-type) facilities in determining the revised emission limits. In no event shall the NO_x emission limits established pursuant to section (g) be less than the NO_x emission limits specified in Condition 21(b). In addition, if appropriate, on a semi-annual basis the district will use all data and related operating experience to establish (i) a revised definition of transient, non-steady state conditions to which the NO_x emission limitations established pursuant to this section (g) shall apply, and (ii) the data collection and recordkeeping requirements that the owner/operator shall use to document the occurrence of transient non-steady state conditions.

Verification: Approval of the source test protocols and the source test reports and submittal of the information required in this Condition shall be deemed as verification for this Condition. In addition, As part of the semiannual Air Quality Reports, the owner/operator shall indicate the date, time, and duration of any violation of this Condition. The owner/operator shall also include quantitative information on the severity of the violation.

AQ-23. The pollutant emission rates from each of the Gas Turbines (S-1 and S-3) during a start-up or shutdown shall not exceed the limits established below. ~~These limits apply to any 60-minute period, not a three-hour average.~~ (PSD)

	~~Start-Up (lbs/hr)~~	~~Shutdown (lbs/hr)~~
~~Oxides of Nitrogen (as NO_2)~~	~~223~~	~~58~~
~~Carbon Monoxide (CO)~~	~~1821~~	~~238~~
~~Precursor Organic Compounds (as CH_4)~~	~~239~~	~~253~~

	Start-Up (lb/start-up)	Shutdown (lb/shutdown)
Oxides of Nitrogen (as NO_2)	240	20
Carbon Monoxide (CO)	2,514	44.1
Precursor Organic Compounds (as CH_4)	48	8

Within three months of the end of the Commissioning period, the owner/operator shall submit a plan designed to minimize emissions during the transient conditions encountered during gas turbine start-ups and shutdowns. This plan shall indicate what steps will be taken to start

controlling NO_X emissions as soon as feasible, including when ammonia can be fed to the SCR system without producing ammonia slip in excess of 10 ppmvd @ 15% O_2. This plan shall be based upon the experience gathered from the source tests performed per condition 13 and actual operating experience gained during the first six-months of operation. This plan shall also be developed in consultation with the manufacturers of the gas turbines, HRSGs, control systems, and air pollution control units. This plan shall be submitted to the CEC CPM for approval. After the plan has been approved, the owner/operator shall use the procedures included in the plan to minimize NO_X emissions during gas turbine start-ups and shutdowns.

Within 24 months of the end of the Commissioning period, the owner/operator shall submit a report to the District and the CEC CPM that establishes reasonable maximum hourly mass emission rates for start-up and shutdown conditions during the combustion process. The revised mass emission rates shall be based upon source test and continuous emission monitoring data. Pending approval of the District and the CEC CPM, these revised mass emission rates shall be established as new emission limitations that will supersede the limits included in this condition.

Verification: This permit condition will be verified with the implementation of Conditions 13, 35, 36, and 45. In the semiannual Air Quality Reports, the owner/operator shall indicate the date, times and duration of any violation to the NOx or CO limits presented in this condition. Approval of the plan and receipt of the report required by this condition are also part of the verification of compliance with this condition.

AQ-24. The Gas Turbines (S-1 and S-3) shall not be in start-up mode simultaneously. (PSD)

Verification: As part of the semiannual Air Quality Reports, the owner/operator shall report any violations of this condition.

Conditions for the Auxiliary Boiler (S-5)

AQ-25. The Auxiliary Boiler (S-5) shall be fired exclusively on natural gas. ~~with a maximum sulfur content of 1 grain per 100 standard cubic feet.~~ (BACT for SO_2 and PM_{10})

Verification: Since the Auxiliary Boilers use the same source of natural gas as the Gas Turbines and the HRSGs, compliance with condition 14 is

deemed as compliance with this condition with respect to the sulfur content of the fuel.

AQ-26. The heat input rate to the Auxiliary Boiler (S-5) shall not exceed ~~266~~320 million BTU per hour, averaged over any rolling 3-hour period. (Cumulative Increase)

Verification: As part of the Air Quality Reports, the owner/operator shall include information on the date and time when the hourly fuel consumption rate exceeds this hourly limit.

AQ-27. The cumulative heat input rate to the Auxiliary Boiler (S-5) shall not exceed ~~399,000~~480,000 million BTU per year. (Cumulative Increase)

Verification: As part of the Air Quality Reports, the owner/operator shall include information on any violations of this annual fuel consumption limit.

AQ-28. The owner/operator of the Auxiliary Boiler (S-5) shall meet all of the requirements listed in (a) through ~~(d)~~(g) below, except during an Auxiliary Boiler Start-up or an Auxiliary Boiler Shutdown. (BACT, PSD)

(a) Nitrogen oxide emissions at P-3 (the exhaust point for the Auxiliary Boiler) shall not exceed ~~2.9~~3.5 pounds per hour, calculated as NO_2. (PSD for NO_x)

(b) The nitrogen oxide concentration at P-3 shall not exceed 9.0 ppmv, measured as NO_x, corrected to 3% O_2, on a dry basis, averaged over any rolling 3-hour period. (BACT for NO_x)

(c) Carbon monoxide emissions at P-3 shall not exceed ~~9.8~~11.8 pounds per hour. (PSD for CO)

(d) The carbon monoxide concentration at P-3 shall not exceed 50 ppmv, corrected to 3% O_2, on a dry basis, averaged over any rolling 3-hour period. (BACT for CO)

(e) Precursor organic compound (POC) emissions at P-3 shall not exceed 0.36 pounds per hour. (cumulative increase)

(f) Sulfur dioxide (SO_2) mass emissions at P-3 shall not exceed 0.5 pounds per hour. (cumulative increase)

(g) Particulate matter (PM10) mass emissions at P-3 shall not exceed 1.6 pounds per hour (cumulative increase)

(h) Ammonia (NH_3) emissions at P-3 shall not exceed 10 ppmv, corrected to 3% O_2, on a dry basis, averaged over any rolling 3-hour period. This ammonia concentration shall be verified by the continuous recording of the ammonia injection rate at the A-5 SCR System. The correlation between the auxiliary boiler heat input rate, A-5 SCR System ammonia injection rate, and corresponding ammonia emission concentration at P-3 shall be determined in accordance with permit condition AQ-38. (TRMP)

Verification: As part of the semiannual Air Quality Reports, the owner/operator shall indicate the date, time, and duration of any violation of this condition. The owner/operator shall also include quantitative information on the severity of the violation.

AQ-29. The Auxiliary Boiler (S-5), its burners, combustion chamber, and exhaust system shall be designed and constructed so that the boiler can be retrofitted with ~~an SCR system and/or~~ an oxidizing catalyst in the event the Auxiliary Boiler cannot consistently comply with the emission limitations specified in condition 28. (BACT for NO_x and CO)

Verification: 45 days prior to the final order for the auxiliary boiler, the owner/operator shall submit a report to the CEC CPM with enough technical information to demonstrate that the boiler could be retrofitted with SCR and/or oxidizing catalyst.

Conditions for All Sources (S-1, S-2, S-3, S-4, and S-5)

AQ-30. The combined heat input rate to the Gas Turbines (S-1 and S-3), HRSGs (S-2 and S-4), and Auxiliary Boiler (S-5) shall not exceed ~~102,960~~109,157 million BTU per calendar day. (PSD, CEC Offsets)

Verification: As part of the Air Quality Reports, the owner/operator shall include information on the date when the daily fuel consumption exceeds this limit.

AQ-31. The cumulative heat input rate to the Gas Turbines (S-1 and S-3), HRSGs (S-2 and S-4), and Auxiliary Boiler (S-5) combined shall not exceed ~~32,900,000~~34,490,400 million BTU per year. (Offsets)

Verification: As part of the Air Quality Reports, the owner/operator shall include information on the date after which this annual limit was exceeded.

AQ-32. Total combined emissions from the Gas Turbines, HRSGs, and Auxiliary Boiler (S-1, S-2, S-3, S-4, and S-5), including emissions generated during Gas Turbine Start-ups, Gas Turbine Shutdowns, Auxiliary Boiler Start-ups, and Auxiliary Boiler Shutdowns, shall not exceed the following limits during any calendar day:

(a) ~~1190~~1,342 pounds of NO_x (as NO_2) per day (CEQA)
(b) ~~522~~46,445 pounds of CO per day (PSD)
(c) ~~892~~271.3 pounds of POC (as CH_4) per day (CEQA)
(d) ~~842~~742 pounds of PM_{10} per day (PSD)
(e) ~~272.4~~282.6 pounds of SO_2 per day (BACT)

During days with two cold start-ups (the Gas Turbines have been out of service for more than 72 hours) daily combined NO_X emissions (as NO_2) from the Gas Turbines, HRSGs, and Auxiliary Boiler (S-1, S-2, S-3, S-4, and S-5) shall not exceed 1330 pounds per day. The number of days where the combined NO_X emissions are greater 1190 lb/day and less than 1330 lb/day shall be limited to 10 per consecutive twelve month period.

Verification: As part of the semiannual Air Quality Reports, the owner/operator shall indicate the date of any violation of this Condition including quantitative information on the severity of the violation. The reports should also identify the days on which two cold start-ups occurred and the associated maximum emissions.

AQ-33. Cumulative emissions from the Gas Turbines, HRSGs, and the Auxiliary Boiler combined (S-1, S-2, S-3, S-4, and S-5), including emissions generated during Gas Turbine Start-ups, and Gas Turbine Shutdowns, ~~Auxiliary Boiler Start-ups, and Auxiliary Boiler Shutdowns,~~ shall not exceed the following limits during any consecutive twelve-month period:

(a) ~~153.2~~175.7 tons of NO_x (as NO_2) per year (Offsets, PSD)
(b) ~~487.5~~506.4 tons of CO per year (Cumulative Increase)
(c) ~~97.61~~33.9 tons of POC (as CH_4) per year (Offsets)
(d) ~~123.55~~131.6 tons of PM_{10} per year (Offsets, PSD)
(e) ~~39.86~~47.11 tons of SO_2 per year (Cumulative Increase)

Verification: As part of the Air Quality Reports, the owner/operator shall include information on the date after which these annual limits were exceeded.

AQ-34. The maximum projected annual toxic air contaminant emissions from the Gas Turbines, HRSGs, and the Auxiliary Boiler combined (S-1, S-2, S-3, S-4, and S-5) shall not exceed the following limits:

(a) ~~3,668~~3,817 pounds of formaldehyde per year

(b) ~~41.7~~460.9 pounds of benzene per year

(c) ~~76.2~~78.5 pounds of Specified polycyclic aromatic hydrocarbons (PAHs) per year;

unless the owner/operator meets the requirements of (d), (e), and (f) below:

(d) The owner/operator shall perform a health risk assessment using the emission rates determined by source test and the most current Bay Area Air Quality Management District (District) approved procedures and unit risk factors in effect at the time of the analysis. The calculated excess cancer risk shall not exceed 1.0 in one million.

(e) The owner/operator shall perform a second risk analysis using the emission rates determined by source test and the procedures and unit risk factors in effect when the Determination of Compliance was issued. The calculated excess cancer risk shall not exceed 1.0 in one million.

(f) Both of these risk analyses shall be submitted to the District and the CEC CPM within 60 days of the source test date. The owner/operator may request that the District and the CEC CPM revise the carcinogenic compound emission limits specified above. If the owner/operator demonstrates to the satisfaction of the APCO that these revised emission limits will satisfy the conditions stated in parts (d) and (e) above, the District and the CEC CPM may, at their discretion, adjust the carcinogenic compound emission limits listed above. (TRMP)

Verification: Compliance with condition 37 shall be deemed as compliance with this condition. In addition, approval by the District and the CEC CPM of the reports prepared for this condition will constitute a verification of compliance with this condition.

AQ-35. The owner/operator shall demonstrate compliance with conditions 15 through 18, 21(a) through 21(d), 23, 24, 26, 28(a) through 28(d), 32(a), 32(b), 33(a), and 33(b) by using properly operated and maintained continuous monitors (during all hours of operation including equipment Start-up and Shutdown periods) for all of the following parameters:

(a) Firing Hours and Fuel Flow Rates for each of the following sources: S-1 and S-2 combined, S-3 and S-4 combined, and S-5.
(b) Oxygen (O2) Concentrations, Nitrogen Oxides (NOx) Concentrations, and Carbon Monoxide (CO) Concentrations at each of the following exhaust points: P-1, P-2 and P-3.
(c) Ammonia injection rate at A-1 and ~~A-2~~A-3 SCR Systems

The owner/operator shall record all of the above parameters every 15 minutes (excluding normal calibration periods) and shall summarize all of the above parameters for each clock hour. For each calendar day, the owner/operator shall calculate and record the total Firing Hours, the average hourly Fuel Flow Rates, and pollutant emission concentrations.

The owner/operator shall use the parameters measured above and District-approved calculation methods to calculate the following parameters:

(d) Heat Input Rate for each of the following sources: S-1 and S-2 combined, S-3 and S-4 combined, and S-5.
(e) Corrected NOx concentrations, NOx mass emissions (as NO2), corrected CO concentrations, and CO mass emissions at each of the following exhaust points: P-1, P-2, and P-3.

For each source, source grouping, or exhaust point, the owner/operator shall record the parameters specified in conditions 35(c) and 35(d) at least once every 15 minutes (excluding normal calibration periods). As specified below, the owner/operator shall calculate and record the following data:

(f) total Heat Input Rate for every clock hour and the average hourly Heat Input Rate for every rolling 3-hour period.
(g) on an hourly basis, the cumulative total Heat Input Rate for each calendar day for the following: each Gas Turbine and associated HRSG combined, the Auxiliary Boiler, and all five sources (S-1, S-2, S-3, S-4, and S-5) combined.
(h) the average NOx mass emissions (as NO2), CO mass emissions, and corrected NOx and CO emission concentrations for every clock hour and for every rolling 3-hour period.
(i) on an hourly basis, the cumulative total NOx mass emissions (as NO2) and the cumulative total CO mass emissions, for each calendar day for the following: each Gas Turbine and associated HRSG combined, the Auxiliary Boiler, and all five sources (S-1, S-2, S-3, S-4, and S-5) combined.
(j) For each calendar day, the average hourly Heat Input Rates, Corrected NOx emission concentrations, NOx mass emissions (as NO2), corrected CO emission concentrations, and CO mass

emissions for each Gas Turbine and associated HRSG combined and the Auxiliary Boiler.

(k) on a daily basis, the cumulative total NOx mass emissions (as NO2) and cumulative total CO mass emissions, for each calendar year for all five sources (S-1, S-2, S-3, S-4, and S-5) combined.

1-520.1, 9-9-501, BACT, Offsets, NSPS, PSD, Cumulative Increase)

Verification: At least 60 days before the initial operation, the owner/operator shall submit to the CEC CPM a plan on how the measurements and recordings required by this condition will be performed. Submittal of the reports will also provide verification of compliance with this condition.

AQ-36. To demonstrate compliance with conditions 23, 32(c) through 32(e), and 33(c) through 33(e), the owner/operator shall calculate and record on a daily basis, the Precursor Organic Compound (POC) mass emissions, Fine Particulate Matter (PM_{10}) mass emissions (including condensable particulate matter), and Sulfur Dioxide (SO_2) mass emissions from each power train and the auxiliary boiler. The owner/operator shall use the actual Heat Input Rates calculated pursuant to condition 35, actual Gas Turbine Start-up Times, actual Gas Turbine Shutdown Times, and CEC and District-approved emission factors to calculate these emissions. The calculated emissions shall be presented as follows:

(a) For each calendar day, POC, PM_{10}, and SO_2 Emissions shall be summarized for: each power train (Gas Turbine and its respective HRSG combined); the Auxiliary Boiler; and the five sources (S-1, S-2, S-3, S-4, and S-5) combined.

(b) (on a daily basis, the cumulative total POC, PM_{10}, and SO_2 mass emissions, for each year for all five sources (S-1, S-2, S-3, S-4, and S-5) combined.

(Offsets, PSD, Cumulative Increase)

Verification: 30 days prior to the expected end of the Commissioning period the owner/applicant shall submit to the CEC CPM a plan on how this condition will be implemented. This plan shall include default emission factors in the absence of source test data. The owner/applicant shall provide a revised plan with the submission of the source test data required in conditions 38, 39, and 40.

AQ-37. To demonstrate compliance with Condition 34, the owner/operator shall calculate and record on an annual basis the maximum projected annual emissions of: Formaldehyde, Benzene, and Specified PAH s. Maximum

projected annual emissions shall be calculated using the maximum Heat Input Rate of ~~32,912,920~~39,390,400 MM BTU/year and the highest emission factor (pounds of pollutant per MM BTU of Heat Input) determined by any source test at the Gas Turbine, HRSG, or Auxiliary Boiler. (TRMP)

Verification: The owner/operator shall include these calculations in the semiannual reports submitted to the CEC CPM.

AQ-38. Within 60 days of start-up of the ~~PDEF~~LMEC, the owner/operator shall conduct a District-approved source test on exhaust point P-1 or P-2 and P-3 to determine the corrected ammonia (NH_3) emission concentration to determine compliance with condition 21(e) and 27(g). The source test shall determine the correlation between the heat input rates of the gas turbine and associated HRSG, A-1 or ~~A-2~~A-3 SCR System ammonia injection rate, and the corresponding NH_3 emission concentration at emission point P-1 or P-2 and the correlation between the heat input rate of the auxiliary boiler, A-5 SCR System ammonia injection rate, and the corresponding NH_3 emission concentration at emission point P-3. The source test shall be conducted over the expected operating range of the turbine (at a minimum, 60%, 80%, and 100% load) to establish the range of ammonia injection rates necessary to achieve NO_x emission reductions while maintaining ammonia slip levels. Continuing compliance with condition 21(e) shall be demonstrated through calculations of corrected ammonia concentrations based upon the source test correlation and continuous records of ammonia injection rate. (TRMP)

Verification: Approval of the source test protocols and the source test reports shall be deemed as verification for this condition.

AQ-39. Within 60 days of start-up of the ~~PDEF~~LMEC and on an annual basis thereafter, the owner/operator shall conduct a District-approved source test on exhaust points P-1 and P-2 while each Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum load to determine compliance with Conditions 21(a), (b), (c), (d), ~~&~~ (f), (g), & (h) and while each Gas Turbine and associated Heat Recovery Steam Generator are operating at minimum load to determine compliance with Conditions 21(c), (d), & (f) and to verify the accuracy of the continuous emission monitors required in condition 35. The owner/operator shall test for (as a minimum): water content, stack gas flow rate, oxygen concentration, precursor organic compound concentration and emissions, methane, ethane, and particulate matter (PM_{10}) emissions including condensable particulate matter. (BACT, offsets)

Verification: Approval of the source test protocols, as required in condition 41, and the source test reports shall be deemed as verification for this condition. The owner/operator shall notify the District and the CEC CPM within seven (7) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CEC CPM within 30 days of the date of the tests.

AQ-40. Within 60 days of start-up of the ~~PDEF~~LMEC and on an annual basis thereafter, the owner/operator shall conduct a District approved source test on exhaust point P-3 while the Auxiliary Boiler (S-5) is operating at maximum allowable operating rates to determine compliance with the emission limitations of Condition 28(a) through 28(d) and to verify the accuracy of the continuous emission monitors required in condition 35. The owner/operator shall test for (as a minimum): water content, stack gas flow rate, oxygen concentration, precursor organic compound concentration and emissions, and particulate matter (PM_{10}) emissions including condensable particulate matter. (BACT, offsets)

Verification: Approval of the source test protocols, as required in condition 41, and the source test reports shall be deemed as verification for this condition. The owner/operator shall notify the District and the CEC CPM within seven (7) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CEC CPM within 30 days of the date of the tests.

AQ-41. The owner/operator shall obtain approval for all source test procedures from the District s Source Test Section and the CEC CPM prior to conducting any tests. The owner/operator shall comply with all applicable testing requirements for continuous emission monitors as specified in Volume V of the District s Manual of Procedures. The owner/operator shall notify the District s Source Test Section and the CEC CPM in writing of the source test protocols and projected test dates at least 7 days prior to the testing date(s). As indicated above, the Owner/Operator shall measure the contribution of condensable PM (back half) to the total PM_{10} emissions. However, the Owner/Operator may propose alternative measuring techniques to measure condensable PM such as the use of a dilution tunnel or other appropriate method used to capture semi-volatile organic compounds. Source test results shall be submitted to the District and the CEC CPM within 30 days of conducting the tests. (BACT)

Verification: Approval of the source test procedures and receipt of source test results will be deemed as verification of this condition.

AQ-42. Within 60 days of start-up of the ~~PDEF~~LMEC and on an biennial basis (once every two years) thereafter, the owner/operator shall conduct a District-approved source test on exhaust point P-1 or P-2 while the Gas Turbine and associated Heat Recovery Steam Generator are operating at maximum allowable operating rates to demonstrate compliance with Condition 34. Unless the requirements of condition 42(b) have been met, the owner/operator shall determine the formaldehyde, benzene, and Specified PAH emission rates (in pounds/MM BTU). If any of the above pollutants are not detected (below the analytical detection limit), the emission concentration for that pollutant shall be deemed to be one half (50%) of the detection limit concentration. (TRMP)

(a) The owner/operator shall calculate the maximum projected annual emission rate for each pollutant by multiplying the pollutant emission rate (in pounds/MM BTU; determined by source testing) by ~~32,912,920~~34,490,400 MM BTU/year.

(b) If three consecutive biennial source tests demonstrate that the emission rates calculated pursuant to part (a) for any of the compounds listed below are less than the annual emission rates shown, then the owner/operator may discontinue future testing for that pollutant: (TRMP)

Benzene	≤	221 pounds/year
Formaldehyde	≤	1,834 pounds/year
Specified PAH s	≤	38 pounds/year

Verification: The owner/operator shall notify the District and the CEC CPM within seven (7) working days before the owner/operator plans to conduct source testing as required by this condition. Source test results shall be submitted to the District and the CEC CPM within thirty (30) days of conducting the test.

AQ-43. The owner/operator shall submit all reports (including, but not limited to monthly CEM reports, monitor breakdown reports, emission excess reports, equipment breakdown reports, etc.) as required by District Rules or Regulations and in accordance with all procedures and time limits specified in the Rule, Regulation, Manual of Procedures, or Enforcement Division Policies & Procedures Manual. (Regulation 2-6-502)

Verification: Submittal of the reports to the CEC CPM constitutes verification of compliance of this condition. All reports shall be submitted to the CEC CPM within thirty (30) days after they are due according to District Rules and Regulations.

AQ-44. The owner/operator shall maintain all records and reports on site for a minimum of 5 years. These records shall include but are not limited to: continuous monitoring records (firing hours, fuel flows, emissions, monitor excesses, breakdowns, etc.), source test and analytical records, emission calculation records, records of plant upsets and related incidents. The owner/operator shall make all records and reports available to District and the CEC CPM staff upon request. (Regulation 2-6-501)

Verification: During site inspection, the owner/operator shall make all records and reports available to the District, California Air Resources Board, and CEC staffs.

AQ-45. The owner/operator shall notify the District and the CEC CPM of any violations of these permit conditions. Notification shall be submitted in a timely manner, in accordance with all applicable District Rules, Regulations, and the Manual of Procedures. Not withstanding the notification and reporting requirements given in any District Rule, Regulation, or the Manual of Procedures, the owner/operator shall submit written notification (facsimile is acceptable) to the Enforcement Division within 96 hours of the violation of any permit condition. (Regulation 2-1-403)

Verification: Submittal of these notifications as required by this condition is the verification of these permit conditions. In addition, as part of the Air Quality Reports, the owner/operator shall include information on the dates when these violations occurred and when the owner/operator notified the District and the CEC CPM.

AQ-46. The stack heights of the emission points P-1 and P-2 shall be at least 150 feet above mean sea level (approximately 138.8 feet above grade level at the stack base). The stack height of the emission point P-3 shall be at least 100.6 feet above mean sea level (approximately 88.6 feet above grade level at the stack base). (PSD, TRMP)

Verification: 45 days prior to the release to the manufacturer of the emission stack's "approved for construction" drawings, the Owner/Operator shall submit the drawings to the CEC CPM for review and approval.

AQ-47. The Owner/Operator of ~~PDEF~~LMEC shall provide adequate stack sampling ports and platforms to enable the performance of source testing. The location and configuration of the stack sampling ports shall be subject to BAAQMD review and approval. (Regulation 1-501)

Verification: One hundred and twenty (120) days before initial operation, the Owner/Operator shall submit to the BAAQMD and the CEC CPM a plan for the installation of stack sampling ports and platforms. Within sixty (60) days of receipt of the plant, the BAAQMD will advise the Owner/Operator and the CEC CPM of the acceptability of the plan; otherwise the plan shall be deemed approved.

AQ-48. Within 180 days of the issuance of the Authority to Construct, the Owner/Operator shall contact the BAAQMD Technical Services Division regarding requirements for the continuous monitors, sampling ports, platforms, and source tests required by Conditions 38, 39, 40, and 42. All source testing and monitoring shall be conducted in accordance with the BAAQMD Manual of Procedures. (Regulation 1-501)

Verification: The owner/operator shall notify the CEC CPM at least seven (7) working days before these meeting are held.

AQ-49. Prior to the issuance of the BAAQMD Authority to Construct for the ~~Pittsburg District Energy Facility~~Los Medanos Energy Center, the Owner/Operator shall demonstrate that valid emission reduction credits in the amount of 176.18 tons/year of Nitrogen Oxides, 112.25 tons/year of Precursor Organic Compounds, and 123.55 tons/year of PM_{10} or equivalent as defined by District Regulations 2-2-302.1, 2-2-302.2, and 2-2-303.1 are under their control through option to purchase contracts or equivalent binding legal documents. Prior to the issuance of a revised BAAQMD Authority to Construct for Los Medanos Energy Center, the Owner/Operator shall demonstrate that valid emission reductions credits in the amount of 25.88 tons/year of Nitrogen Oxides, and 8.05 tons/year of PM10 or equivalent as defined by District Regulations listed above are under their control. (Offsets)

Verification: No more than 30 days after the issuance or a revision of an Authority to Construct, the owner/operator shall provide a copy of the ATC to the CEC CPM for review.

AQ-50. Prior to the ~~start of construction~~issuance of the BAAQMD Permit to Operate for the ~~of the~~ ~~Pittsburg District Energy Facility~~Los Medanos Energy Center, the owner/operator shall provide emission reduction credits in the amount of 176.18 tons/year of Nitrogen Oxides, 112.25 tons/year of Precursor Organic Compounds, and 123.55 tons/year of PM_{10} or equivalent as defined by District Regulations 2-2-302.1, 2-2-302.2, and 2-2-303.1. Prior to the issuance of a BAAQMD Permit to Operate, the Owner/Operator shall provide additional emission reduction credits in the amount of 25.88

tons/year of Nitrogen Oxides, and 8.05 tons/year of PM10 or equivalent as defined by District Regulations listed above. (Offsets)

Verification: At least 30 days prior to the start of construction, the owner/operator must submit a copy of the required offsets or emission reduction credits (ERCs) to the CEC CPM. At most 15 days after the ~~is~~ revised conditions of certifications are adopted, the owner/operator must submit a copy of the required offsets or emission reduction credits (ERCs) to the CEC CPM

AQ-51. Pursuant to BAAQMD Regulation 2, Rule 6, section 404.1, the owner/operator of ~~PDEF~~LMEC ~~-~~shall submit an application to the District for a Federal (Title V) Operating Permit within 12 months of the date of issuance of the BAAQMD Permit to Operate for the ~~PDEF~~PDEF. (Regulation 2-6-404.1)

Verification: The owner/operator shall notify the CEC CPM of the submittal of this application. In addition, the owner/operator shall submit to the CPM a copy of the Federal (Title V) Operating Permit within 30 days after it is issue by the District.

Conditions Not Included in the District's Permit Conditions

AQ-52. The cooling towers shall be properly installed and maintained to minimize drift losses. The cooling towers shall be equipped with high efficiency mist eliminators with a maximum guarantee drift rate of 0.0005%. The maximum total dissolved solids (TDS) sampled at the based of the cooling tower or at the point of return to the wastewater facility shall not be higher than ~~2550~~3765 mg/l. The owner/operator shall sample the water at least once a day.

Verification: The owner/operator shall submit to the CEC CPM a guarantee letter from the cooling tower manufacturer prior to its installation. As part of the compliance record, the owner/operator shall keep records on-site on the TSC content of water in the cooling tower.

AQ-53. Before ERCs generated from sources located outside the Pittsburg/Antioch area are used, direct NO_x and VOC emissions shall be offset with the available ERCs generated by the permanent closure of the Owens-Broackway facility located in the city of Antioch. SO_x ERCs used to offset direct PM10 emissions shall also be obtained from the same source before other sources are used, if needed.

Verification: At least 30 days prior to the start of construction, the owner/operator must submit a copy of the required offsets or ERCs to the CEC compliance manager demonstrating compliance with this condition.

Additional California Energy Commission Permit Conditions Applicable to Construction Activities: These conditions are not included in the District s Determination of Compliance/Authority to Construct.

For the purposes of these conditions on construction activities, the following definitions apply:

(1) ACTIVE OPERATIONS shall mean any activity capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, or heavy- and light-duty vehicular movement.

(2) CHEMICAL STABILIZERS mean any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation; and should meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(3) CONSTRUCTION/DEMOLITION ACTIVITIES are any mechanical activities preparatory to or related to the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities; grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(4) DISTURBED SURFACE AREA means a portion of the earth s surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust.

(5) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(6) EARTH-MOVING ACTIVITIES shall include, but not be limited to, grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, or soil mulching.

(7) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man.

(8) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of ten consecutive days.

(9) STABILIZED SURFACE means:

(a) any disturbed surface area or open storage pile which is resistant to wind-driven fugitive dust;

(b) any unpaved road surface in which any fugitive dust plume emanating from vehicular traffic does not exceed 20 percent opacity.

(10) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

AQ-54. The project owner shall implement a CEC CPM approved fugitive Dust Control Plan.

Protocol: The plan shall include the following:

1. A description of each of the active operation(s) which may result in the generation of fugitive dust;

2. An identification of all sources of fugitive dust (e.g., earth-moving, storage piles, vehicular traffic, etc.

3. A description of the Best Available Fugitive Dust Control measures (from attached Table 1) to be applied to each of the sources of dust emissions identified above (including those required in AQ-55 below). The description must be sufficiently detailed to demonstrate that the applicable best available control measure(s) will be utilized and/or installed during all periods of active operations;

4. In the event that there are special technical (e.g., non-economic) circumstances, including safety, which prevent the use of at least one of the required control measures for any of the sources identified, a justification statement must be provided to explain the reason(s) why the required control measures cannot be implemented.

Verification: Not later than 60 days prior to the commencement of construction, the project owner shall submit the plan to the CEC CPM for review and approval. The project owner shall maintain daily records to

document the specific actions taken pursuant to the plan. A summary of the monthly activities shall be submitted to the CPM via the Monthly Compliance Report.

AQ-55. During the construction phase of the project, the project owner shall:

1. Prevent or remove within one hour the track-out of bulk material onto public paved roadways as a result of their operations, or take at least one of the actions listed in Table 2 (attached) to prevent the track-out of bulk material onto public paved roadways as a result of their operations and remove such material at anytime track-out extends for a cumulative distance of greater than 50 feet on to any paved public road during active operations;

2. Install and use a track-out control device to prevent the track-out of bulk material from areas containing soils requiring corrective action (as currently identified in drawing no. 5-1 of the addendum dated February 12, 1999 to the Corrective Measures Study performed by the Mark Group for USS-POSCO Industries) to other areas within the project construction site and laydown area;

3. Minimize fugitive particulate emissions from vehicular traffic on paved roads and paved parking lots on the construction site by vacuum mechanical sweeping or water flushing of the road surface to remove buildup of loose material. The project owner shall inspect on a daily basis the conditions of the paved roads and parking lots to determine the need for mechanical sweeping or water flushing.

Verification: The project owner shall maintain a daily log during the construction phase of the project indicating: 1) the manner in which compliance with AQ-55 is achieved and 2) the date and time when the inspection of paved roads and parking lots occurs and the date and time(s) when the cleaning operation occurs. The logs shall be made available to the CEC CPM upon request.

AQ-56. At any time when fugitive dust from PDEF project construction is visible in the atmosphere beyond the property line, the project owner will identify the source of the fugitive dust and implement one or more of the appropriate control measures specified in Table 3 (attached).

Verification: The project owner will maintain a daily log recording the dates and times that measures in Table 3 (attached) have been implemented and make them available to the CEC CPM upon request.

AQ-57. Upon completion of construction, the project owner will ensure that all areas within the largest extent of the final footprint (as identified in drawing no. 5-1 of the addendum dated February 12, 1999 to the Corrective Measures Study performed by the Mark Group for USS-POSCO Industries) containing soil that exceed the approved arsenic background concentration of 24 mg/kg are capped with a minimum 1-foot thickness of one or more of the following: soil, gravel, asphalt or concrete paving, or buildings.

Verification: As part of the fugitive dust control plan required in AQ-54, the project owner will specify measures that will be taken to comply with AQ-57, or indicate that capping is not required based on revised regulatory levels approved by DTSC. The plan will include the areas subject to capping and methods used.

AQ-58. Prior to the start of construction, the project owner shall purchase, install, and operate a particulate (PM_{10}) and ($PM_{2.5}$) air monitoring station in cooperation with the Delta Energy Center and in consultation with BAAQMD to be located in the Pittsburg-Antioch area. The project owner and Delta Energy Center shall measure ambient air quality, including particulate emissions, for one year prior to commercial operation and for two years after the start of commercial operation for their respective facilities.

Verification: At least 60 days prior to the start of construction of the power plant, the project owner shall submit to the CEC CPM a copy of the purchase agreement for a particulate air monitoring station, and an installation and operation plan for the monitoring station that has been developed in cooperation with Delta Energy Center and in consultation with BAAQMD. The project owner shall submit summaries of the air quality measurements in the Monthly Compliance Reports.

TABLE 1
BEST AVAILABLE FUGITIVE DUST CONTROL MEASURES

FUGITIVE DUST SOURCE CATEGORY	**CONTROL ACTIONS**
Earth-moving (except construction cutting and filling areas, and mining operations)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the CEC CPM. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the CEC CPM. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the CEC CPM, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.
Earth-moving: Construction cut areas and mining operations:	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	Apply chemical stabilizers within five working days of grading completion; OR
	Take either the first or third action specified below for inactive disturbed surface areas.
Inactive disturbed surface areas	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS
	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	Utilize any combination of the three control actions immediately above such that, in total, these actions apply to all inactive disturbed surface areas.
Unpaved Roads	Water all roads used for any vehicular traffic at least once per every two hours of active operations; OR
	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	Apply chemical stabilizers; OR
	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	Install temporary coverings; OR
	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile.
All Categories	Any other control measures approved by the CEC CPM as equivalent to the methods specified in Table 1 may be used.

TABLE 2
TRACK-OUT CONTROL OPTIONS

(1)	Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with the public paved surface, and extending for a centerline distance of at least 100 feet and a width of at least 20 feet.
(2)	Pave from the point of intersection with the public paved road surface, and extending for a centerline distance of at least 25 feet and a width of at least 20 feet, and install a track-out control device immediately adjacent to the paved surface such that exiting vehicles do not travel on any unpaved road surface after passing through the track-out control device.
(3)	Any other control measures approved by the CEC CPM as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTROL MEASURES FOR WIND CONDITIONS EXCEEDING 25 MPH

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	Cease all active operations; OR
	Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR
	Apply chemical stabilizers prior to wind event; OR
	Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR
	Take the actions specified in Table 1, for vegetative ground cover specified under inactive disturbed surface areas ; OR
	Utilize any combination of the three control actions immediately above such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	Apply chemical stabilizers prior to wind event; OR
	Apply water twice [once] per hour during active operation; OR
	Stop all vehicular traffic.
Open storage piles	Apply water twice [once] per hour; OR
	Install temporary coverings.
Paved road track-out	Cover all haul vehicles; OR
	Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.